

Amendments to the Specification

Please replace the paragraph on page 10, line 25 and continuing until page 11, line 6, with the following paragraph:

Rate controller 28 operably connects to both transcoding apparatus 26, scheduler 34, and pass through apparatus 30, and determines what bit rate is to be used for video data transmitted from network device 20. More specifically, based on messages received from rate controller 28, transcoding apparatus 34 adjusts the bit rate of compressed video data accordingly. Rate controller 28 may rely on information regarding the channel that output bitstream 37 is transmitted onto. For example, rate controller 28 may be configured to receive a rate value from an RADSL transmitter in an ADSL embodiment or to receive a rate value from an ATM network in an ATM environment. A control signal is provided by the rate controller 28 to transcoding apparatus 26 and/or pass through apparatus 30. The control signal specifies what data to pass through and the amount of modifying transcoding apparatus 26 performs to achieve the desired output bit rate from network device 20. Since transcoding and pass through of compressed video data within network device 20 may occur on a macroblock level, slice level (as [[we]] will be described in further detail below), or picture level, messages from rate controller 28 may specify the amount of modifying on each of these levels. The output of transcoding apparatus 26 is provided to output buffer 32.

Please replace the paragraph beginning on page 13, line 1 with the following paragraph:

Picture pass through 40 is well suited for use with compressed video data when the number of bits for an entire picture fit within the allowable bandwidth and no transcoding is required for compressed video data in the picture. When picture pass through 40 receives a signal from rate controller 29 to this effect, picture pass through 40 directly copies picture data for the current picture from buffer 24 to output buffer 32. To locate the boundaries for data copy, pass through apparatus 30 may parse the bitstream and locate the picture start codes for the current picture and next picture as they are found in each picture header. Picture pass through 40 may significantly speed data transmission using network device 20 since these synchronization bits are easily located in the compressed bitstream.

Please replace the paragraph beginning on page 14, line 3 with the following paragraph:

In some cases, even after picture pass through and slice pass through, there may be a significant number of macroblocks inside a picture that do not require transcoding. This proportion of compressed video data may be passed through to save computation cycles (as opposed to transcoding the data). In addition, macroblock pass through 44 allows more flexible rate control without picture or slice boundary restrictions, thus providing a more balanced transcoding (e.g. quantization) and a more even picture quality.